TM-2030 GE / TMC-2030 GE
Progressive Scan CCD

- *1" progressive scan IT CCD (Kodak KAI-2093)*
- *1920 x 1080 pixels (HDTV format)*
- *7.4 µm square pixels*
- *32 fps in dual-tap mode*
- *SW selectable single-tap mode @ 16 fps*
- *12-bit A/D (linear) or 8-bit/10-bit with look-up table (LUT)*
- *GigE Vision Ethernet output and analog output*
- *100 m with standard CAT 5E or CAT 6 cable*
- *Full-frame shutter to 1/16,000 sec.*
- *Asynchronous reset, no-delay, pulse width control shutter*
- *Defective pixel compensation*
- *PIV (particle imaging velocimetry) mode*
- *Extensive software developer's kit (SDK)*
- *Monochrome or color*

GigE ™
VISION

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Specifications for TM-2030GE/TMC-2030GE

Specifications	TM-2030GE/TMC-2030GE
Sensor	1" progressive scan interline transfer CCD
Active area	14.2mm x 8.0mm
Active pixels	1920 (H) x 1080 (V)
Cell size	7.4 µm x 7.4 µm
Readout Mode	1920 (H) x 1080 (V) @ 32 Hz (dual-tap) or 16 Hz (single-tap) selectable
Synchronization	Internal/External auto switch HD/VD, 4.0 Vp-p impedance 4.7K Ω VD= 32.3 ± 2%, non-interlace HD= 36.4 kHz ± 2%
Pixel clock	40.00 MHz
S/N ratio	>57 dB
Sensitivity Mono Color	0.45 lux f=1.4 (no shutter) @ 32 fps, 3.6 lux f=1.4 (no shutter) @ 32 fps, Pixel sensitivity: 14 µV/e-
Video output Analog Digital	1.0 Vp-p, 75 Ω Gigabit Ethernet (8-bit/10-bit/12-bit)
Color (RMC/TMC-2030 only)	Raw Bayer output for host-based interpolation
Gamma	Programmable LUT (Gamma 1.0 std)
Shutter speed (programmable)	1/32 to 1/16,000 sec in increments of 27.5 µs
Lens mount	C, F, M42 mount (use >1" format lenses)
Power	12V DC ± 10%, 690 mA (typical at 25° C)
Operating temperatire	-10° C to 50° C
Vibration	7 Grms (10 Hz to 2000 Hz) Random
Shock	70 G, 11 ms, half-sine
Dimensions (H x W x L)	51 mm x 51 mm x 85 mm
Weight	215 g (without tripod)

Spectral Response

TM-2030GE (monochrome)

TMC-2030GE (color)

Connector Pin-out

12-Pin Connector

1	GND (power)	7	VD in
2	+12V	8	Strobe out
3	GND (analog)	9	HD in
4	Video out	10	Reserved
5	GND (digital)	11	NC
6	VINIT in	12	Reserved

GUI Interface

A user-friendly graphical user interface (GUI), provided as part of the camera's extensive software development kit (SDK), allows users to control various camera functions, including:
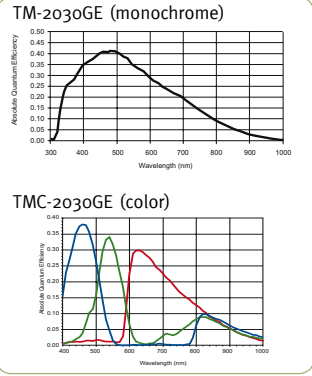
- Shutter control for manual async. and pulse width control
- Gain control
- A/D reference voltage control
- Save settings
- Load settings
- Report settings
- LUT setting and graphic display
- Scanning mode selection and Option selections
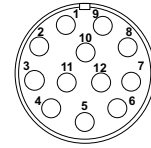- Channel auto balancing

The SDK also provides functions for controlling the grabbing of images, and configuring local I/Os, by means of an integrated API and a set of powerful C++ classes. Changes in the camera's acquisition modes automatically update the API for easy image acquisition. CPU usage is only a few percent, thanks to the TCP/IP offload engine.

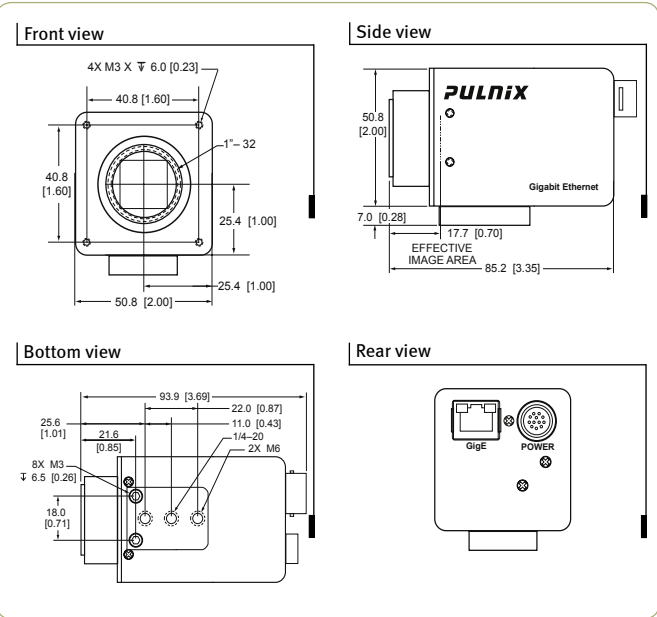Software available for download at www.jai.com

Dimensions

Front view

4X M3 X ▼ 6.0 [0.23]
40.8 [1.60]
40.8 [1.60]
1"– 32
25.4 [1.00]
25.4 [1.00]
50.8 [2.00]

Side view

PULNiX
50.8 [2.00]
Gigabit Ethernet
7.0 [0.28]
17.7 [0.70]
EFFECTIVE IMAGE AREA
85.2 [3.35]

Bottom view

93.9 [3.69]
25.6 [1.01]
21.6 [0.85]
22.0 [0.87]
11.0 [0.43]
1/4–20
2X M6
8X M3 ▼ 6.5 [0.26]
18.0 [0.71]

Rear view

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Ordering Information

Camera	
Lead Processing	TM-2030GE (mono), TMC-2030GE (color)
RoHS Compliant	RM-2030GE (mono), RMC-2030GE (color)
Optional Functions	
Internal IR Filter Added	OP3-1
Optical Filter Removal	OP3-2 (color only)
Glassless CCD Imager	OP21
Ultraviolet Imager	OP21-UV (monochrome only)
F mount	OP65-6
M42 mount	OP65-7
M42 mount, 10mm back focus	OP65-8
Optional Accessories (must be ordered separately)	
Power Supply/2m cable	PD-12UUP/12P-02S
Power Supply	PD-12UUP series (includes power connector)

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